

## CLAIMS

1. A method for publishing update information for a computer readable file associated with a sequence of states, the method comprising:

creating at least two update patches, such that each update patch has a first state and a second state associated therewith, the first state and the second state of each update patch being states within the sequence of states, the first state of each update patch preceding in the sequence of states the second state of that update patch, and each update patch specifying information about differences between the first state and the second state; and

storing the update patches such that each update patch is accessible to at least one update data source, where each update data source is disposed to receive a request associated with one of the update patches and transmit the requested update patch over a computer network; wherein:

the computer readable file comprises a virus protection software application.

2. The method of claim 1 wherein the virus protection software application comprises a virus detecting routine.

3. The method of claim 1 wherein the virus protection software application comprises virus signature information.

4. A method for publishing update information for a computer readable file associated with a sequence of states, the method comprising:

creating at least two update patches, such that each update patch has a first state and a second state associated therewith, the first state and the second state of each

update patch being states within the sequence of states, the first state of each update patch preceding in the sequence of states the second state of that update patch, and each update patch specifying information about differences between the first state and the second state; and  
storing the update patches such that each update patch is accessible to at least one update data source, where each update data source is disposed to receive a request associated with one of the update patches and transmit the requested update patch over a computer network; wherein:

the computer readable file is a file from the group of files comprising:

- a data file;
- a program file;
- a database file;
- a graphics file;
- an audio file;
- a video file.

5. The method of claim 4 wherein the file comprises at least one rule for a spam filter.
6. The method of claim 4 wherein the file comprises at least one rule for a firewall.
7. A method for creating update information for a computer readable file associated with a sequence of states, the method comprising:

creating at least two update patches, such that each update patch has a first state and a second state associated therewith, the first state and the second state of each update patch being states within the sequence of states, the first state of each update patch preceding in the sequence of states the second state of that update

patch, and each update patch specifying information about differences between the first state and the second state; wherein:

each update patch has a tier associated therewith, the tier being a positive integer that corresponds to the number of states between the first state and the second state associated with that update patch; and

at least one of the update patches has a tier that is different from the tier of another update patch; wherein:

for each update patch having a tier greater than one, there exists a sequential plurality of unitary update patches each having a tier of one, such that the update patch having a tier greater than one and the sequential plurality of unitary update patches have the same overall beginning state and the same overall ending state, and the update patch having a tier greater than one contains fewer bits than the agglomerated sequential plurality of unitary update patches; wherein:

the computer readable file comprises a virus protection software application.

8. The method of claim 7 wherein the virus protection software application comprises a virus detecting routine.

9. The method of claim 7 wherein the virus protection software application comprises virus signature information.

10. A method for creating update information for a computer readable file associated with a sequence of states, the method comprising:

creating at least two update patches, such that each update patch has a first state and a second state associated therewith, the first state and the second state of each update patch being states within the sequence of states, the first state of each

update patch preceding in the sequence of states the second state of that update patch, and each update patch specifying information about differences between the first state and the second state; wherein:

each update patch has a tier associated therewith, the tier being a positive integer that corresponds to the number of states between the first state and the second state associated with that update patch; and

at least one of the update patches has a tier that is different from the tier of another update patch; wherein:

for each update patch having a tier greater than one, there exists a sequential plurality of unitary update patches each having a tier of one, such that the update patch having a tier greater than one and the sequential plurality of unitary update patches have the same overall beginning state and the same overall ending state, and the update patch having a tier greater than one contains fewer bits than the agglomerated sequential plurality of unitary update patches; wherein:

the computer readable file is a file from the group of files comprising:

a data file;

a program file;

a database file;

a graphics file;

an audio file;

a video file.

11. The method of claim 10 wherein the file comprises at least one rule for a spam filter.

12. The method of claim 10 wherein the file comprises at least one rule for a firewall.

13. A method for creating update information for a computer readable file associated with a sequence of states, the method comprising:

creating at least two update patches, such that each update patch has a first state and a second state associated therewith, the first state and the second state of each update patch being states within the sequence of states, the first state of each update patch preceding in the sequence of states the second state of that update patch, and each update patch specifying information about differences between the first state and the second state; and

creating at least two catalogs, each catalog specifying at least one update patch; wherein: a catalog contains information pertaining to flavor of the computer readable file; and flavor consists of at least one characteristic from the group of characteristics comprising computer architecture with which the computer readable file can be used, operating system with which the computer readable file can be used, and natural language with which the computer readable file communicates to users; wherein:

the computer readable file comprises a virus protection software application.

14. The method of claim 13 wherein the virus protection software application comprises a virus detecting routine.

15. The method of claim 13 wherein the virus protection software application comprises virus signature information.

16. A method for creating update information for a computer readable file associated with a sequence of states, the method comprising:

creating at least two update patches, such that each update patch has a first state and a second state associated therewith, the first state and the second state of each update patch being states within the sequence of states, the first state of each update patch preceding in the sequence of states the second state of that update patch, and each update patch specifying information about differences between the first state and the second state; and

creating at least two catalogs, each catalog specifying at least one update patch; wherein:  
a catalog contains information pertaining to flavor of the computer readable file; and  
flavor consists of at least one characteristic from the group of characteristics comprising  
computer architecture with which the computer readable file can be used,  
operating system with which the computer readable file can be used, and natural  
language with which the computer readable file communicates to users; wherein:  
the computer readable file is a file from the group of files comprising:

- a data file;
- a program file;
- a database file;
- a graphics file;
- an audio file;
- a video file.

17. The method of claim 16 wherein the file comprises at least one rule for a spam filter.
18. The method of claim 16 wherein the file comprises at least one rule for a firewall.

19. A computer-readable medium containing computer program instructions for publishing update information for a computer readable file associated with a sequence of states, said computer program instructions performing the steps of:

creating at least two updates, such that each update has a first state and a second state associated therewith, the first state and the second state of each update being states within the sequence of states, the first state of each update preceding in the sequence of states the second state of that update, and each update specifying information about differences between the first state and the second state; and storing the updates such that each update patch is accessible to at least one update data source, where each update data source is disposed to receive a request associated with one of the updates and transmit the requested update over a computer network; wherein:

the computer readable file comprises a virus protection software application.

20. The computer-readable medium of claim 19 wherein the virus protection software application comprises a virus detecting routine.

21. The computer-readable medium of claim 19 wherein the virus protection software application comprises virus signature information.

22. A computer-readable medium containing computer program instructions for publishing update information for a computer readable file associated with a sequence of states, said computer program instructions performing the steps of:

creating at least two updates, such that each update has a first state and a second state associated therewith, the first state and the second state of each update being states within the sequence of states, the first state of each update preceding in the

sequence of states the second state of that update, and each update specifying information about differences between the first state and the second state; and storing the updates such that each update is accessible to at least one update data source, where each update data source is disposed to receive a request associated with one of the updates and transmit the requested update over a computer network; wherein:

the computer readable file is a file from the group of files comprising:

- a data file;
- a program file;
- a database file;
- a graphics file;
- an audio file;
- a video file.

23. The computer-readable medium of claim 22 wherein the file comprises at least one rule for a spam filter.

24. The computer-readable medium of claim 22 wherein the file comprises at least one rule for a firewall.

25. A computer-readable medium containing computer program instructions for creating update information for a computer readable file associated with a sequence of states, said computer program instructions performing the steps of:

creating at least two updates, such that each update has a first state and a second state associated therewith, the first state and the second state of each update being states within the sequence of states, the first state of each update preceding in the



sequence of states the second state of that update, and each update specifying information about differences between the first state and the second state; wherein:

each update has a tier associated therewith, the tier being a positive integer that corresponds to the number of states between the first state and the second state associated with that update; and at least one of the updates has a tier that is different from the tier of another update;

wherein:

for each update having a tier greater than one, there exists a sequential plurality of unitary updates each having a tier of one, such that the update having a tier greater than one and the sequential plurality of unitary updates have the same overall beginning state and the same overall ending state, and the update having a tier greater than one contains fewer bits than the agglomerated sequential plurality of unitary updates; wherein:

the computer readable file comprises a virus protection software application.

26. The computer-readable medium of claim 25 wherein the virus protection software application comprises a virus detecting routine.

27. The computer-readable medium of claim 25 wherein the virus protection software application comprises virus signature information.

28. A computer-readable medium containing computer program instructions for creating update information for a computer readable file associated with a sequence of states, said computer program instructions performing the steps of:

creating at least two updates, such that each update has a first state and a second state associated therewith, the first state and the second state of each update being states within the sequence of states, the first state of each update preceding in the sequence of states the second state of that update, and each update specifying information about differences between the first state and the second state; wherein:

each update has a tier associated therewith, the tier being a positive integer that corresponds to the number of states between the first state and the second state associated with that update; and

at least one of the updates has a tier that is different from the tier of another update; wherein:

for each update having a tier greater than one, there exists a sequential plurality of unitary updates each having a tier of one, such that the update having a tier greater than one and the sequential plurality of unitary updates have the same overall beginning state and the same overall ending state, and the update having a tier greater than one contains fewer bits than the agglomerated sequential plurality of unitary updates; wherein:

the computer readable file is a file from the group of files comprising:

- a data file;
- a program file;
- a database file;
- a graphics file;
- an audio file;

a video file.

29. The computer-readable medium of claim 28 wherein the file comprises at least one rule for a spam filter.

30. The computer-readable medium of claim 28 wherein the file comprises at least one rule for a firewall.

31. A computer-readable medium containing computer program instructions for creating update information for a computer readable file associated with a sequence of states, said computer program instructions performing the steps of:

creating at least two updates, such that each update has a first state and a second state associated therewith, the first state and the second state of each update being states within the sequence of states, the first state of each update preceding in the sequence of states the second state of that update, and each update specifying information about differences between the first state and the second state; and creating at least two catalogs, each catalog specifying at least one update; wherein: a catalog contains information pertaining to flavor of the computer readable file; and flavor consists of at least one characteristic from the group of characteristics comprising computer architecture with which the computer readable file can be used, operating system with which the computer readable file can be used, and natural language with which the computer readable file communicates to users; wherein: the computer readable file comprises a virus protection software application.

32. The computer-readable medium of claim 31 wherein the virus protection software application comprises a virus detecting routine.

33. The computer-readable medium of claim 31 wherein the virus protection software application comprises virus signature information.

34. A computer-readable medium containing computer program instructions for creating update information for a computer readable file associated with a sequence of states, said computer program instructions performing the steps of:

creating at least two updates, such that each update has a first state and a second state

associated therewith, the first state and the second state of each update being

states within the sequence of states, the first state of each update preceding in the

sequence of states the second state of that update, and each update specifying

information about differences between the first state and the second state; and

creating at least two catalogs, each catalog specifying at least one update; wherein:

a catalog contains information pertaining to flavor of the computer readable file; and

flavor consists of at least one characteristic from the group of characteristics comprising

computer architecture with which the computer readable file can be used,

operating system with which the computer readable file can be used, and natural

language with which the computer readable file communicates to users; wherein:

the computer readable file is a file from the group of files comprising:

a data file;

a program file;

a database file;

, a graphics file;

an audio file;

a video file.

35. The computer-readable medium of claim 34 wherein the file comprises at least one rule for a spam filter.

36. The computer-readable medium of claim 34 wherein the file comprises at least one rule for a firewall.